

### Summary

The invention refers to a device for the detection of changes in the density of a solid, liquid or gaseous medium. The device is capable of detecting the effects of physical and/or chemical parameters, causing changes in the density and/or compression constants of the medium. The device comprises a transmitter unit for transmitting a send signal, having a constant frequency and amplitude and the send signal, comprising a minimum of one period, with a minimum of one receiver unit receiving the response signals reflected and/or transmitted from the medium. The transmitter and receiver units are coupled to the medium. The receiver unit is coupled to an A/D converter and a sampling device. The transmitter unit and the output of the A/D converter are coupled to a numerical processor for determination of the phase shift between the send signal and the receive signal, with the output being connected to a display. A memory may be used instead of a display. – Fig. 2 –